

factured as rapidly as the monetary condition of the country will permit. The experience of the past is the surest and safest guide in making preparation for the future.

An increase in the annual appropriation for arming and equipping the whole body of the militia is again brought to the attention of Congress, with the hope of some legislation thereon. Not only should the appropriation be largely increased to meet the wants of our ever-growing population, but some legislative action should be taken to relieve many of the States and Territories from charges for arms issued to them during the rebellion, and which should not in fairness have been so charged. This subject has been so often referred to in previous reports, and so largely dwelt upon, that a more extended reference to it at this time is deemed unnecessary.

In October, 1873, consideration was given to the necessity of changes that should be made in the horse equipments, accoutrements, tools, and materials for cavalry service in the field, and the determination of a standard table of supply. A board of cavalry officers was appointed, to give the Department the benefit of its knowledge and experience. Its report is appended to that of the Chief of Ordnance.

The recommendations, when executed, will undoubtedly add greatly to the efficiency of the cavalry service, and every detail will be carried out as fast as funds will permit, and with due regard to the utilization of the stock on hand.

For several years past I have directed attention to the large number of arsenals east of the Mississippi River scattered through the country, the consequent lack of concentration of work in the interest of economy and perfection of product, and the undoubted necessity of disposing of several of these national establishments, and the building up of a grand arsenal on the Atlantic seaboard. In order to facilitate intelligent action on the subject, by the collection of all necessary data for the information of the Department and of Congress, a board of ordnance officers was appointed some months since, to make a comprehensive and exhaustive study of the subject, and also of the question of a proper location for a powder depot and of an experimental ground for the testing of heavy ordnance. After several months of patient and careful investigation the board has made its report, which is herewith transmitted. It strongly recommends the retention of the Springfield Armory and the Frankford Arsenal, and the establishment of a grand arsenal in the vicinity of New York City for manufacturing purposes; retaining also the Indianapolis Arsenal, Indiana; Kennebec Arsenal, Maine; Fortress Monroe Arsenal, Virginia; and Augusta Arsenal, Georgia, as places for storage and repair. It recommends the sale of the Allegheny, Columbus, Detroit, Pikesville, Watertown, and Washington Arsenals, the sales to be made as rapidly as circumstances may permit, the proceeds to be devoted to the purchase of a site and the erection of buildings for the grand arsenal. I heartily concur in these recommendations and invoke favorable consideration on the part of Congress. Some such definite policy must be inaugurated and steadily pursued. That such establishments demand the fostering care of the country calls for no argument, and that the number of our arsenals must be reduced seems to be the conclusion reached by Congress in the past two years, judging from the very small appropriations made for their care and pre-

servation—appropriations not sufficient to keep the buildings from running to decay. These seemingly large reductions by sale will, when accomplished, leave thirteen arsenals and the armory; a number amply sufficient, when liberally sustained, to meet all the demands of the nation, and all this can be effected from the sales of arsenals, and without the expenditure of a single dollar out of the national Treasury.

The establishment of a powder-depot and an experimental ground for heavy cannon are also discussed by the board, and its recommendations are approved. An estimate for these very important and desirable objects has been made, which it is earnestly urged that Congress take favorable action upon. The great gun problem cannot be solved without continued experiments, considerable expenditure, and all the facilities of a well appointed experimental and proving ground. The improvements in modern gunnery are as much the result of the hourly demonstrations on the experimental ground as in the success of mechanical manipulation and skill in the workshop, and certainly no exercise of theoretical knowledge and research will avail without the tests of experimental proof.

We have to thank Captain B. Burgess, Secretary and Curator of "The Royal United Service Institution," for copies of the *Bye-Laws*, a description of the Institution and forms of application for membership, which we shall be happy to place at the disposal of any officer of the Canadian Army who would wish to avail himself of the advantages it affords, for the scientific and literary illustration of the "Art of War." As we have repeatedly brought the valuable aid to military knowledge which this Institution affords before the officers of our military force, we now publish for their information the "Design and authorized description," for the purpose of exhibiting its constitution and the objects for which it was organized, in the hope that they will take advantage of such valuable aid to obtain a true notion of military science.

MUSIC.—No. 1 of *The Chorister* containing the Anthem—"The earth is the Lord's and the fullness thereof,"—is just to hand. *The Chorister* is neatly got up and the very thing for the church choir, the home circle and the social gathering. We wish the publisher, Mr. Ashdown of Amherstburg, Essex County, Ont., every success. Send in your subscriptions to him, only 56c. a year and postage free to clubs of four or more.

THE SUPPLY AND DEMAND FOR LUMBER.—The *Portland Press* says that within ten years not less than 12,000,000 acres of forest have been cut down or burned over in this country. Much of this timber is used for fuel, twenty-five cities being on record as consuming from 5,000 to 10,000 each. Fences used up much timber, and railroad ties require the product of 150,000 acres a year. The amount of pine and hemlock timber yet standing in the forests of the timber States is estimated at 225,000,000,000 feet. The sum of \$44,000,000 is invested in this industry, affording employment to 200,000 men.

Fighting Fish.

The *Daily News* says:—"We are threatened with the introduction of a new 'sport' into this country. Our versatile neighbors across the Channel have lately introduced a new kind of sport—a fight between fishes. Mr. Carbonnier, who has been successful in introducing several varieties of tropical fish from the waters of China and India—such as the climbing perch, the gomerami, the paradise fish, the rainbow fish, and the telescope fish—has lately added to his collection some examples of a piscine curiosity known as the 'fighting fish.' It appears to be a favorite amusement among the natives of Java and other East Indian islands to arrange tournaments between these creatures, and they watch their combats with an eagerness that would do credit to a confirmed bookmaker on the turf. Beta pass as freely on the results of the struggle as on any of our great sporting events, and the establishment of a Tattersall's rooms among the dusky Malays offers a promising speculation to any enterprising individual. The selected champions are put in separate glass vessels, which are placed near each other, and the 'first scene' comprises their ineffectual attempts to penetrate the intervening glass. In due time the fishes become greatly excited and continually change color till at last they are almost black, their gill covers open out in a sort of Elizabethan frill or collar on each side of their head, the tail and fins become phosphorescent in appearance, and beautiful colors of every hue intermittently tinge their scales. Still they cannot reach each other, and their anger is roused to its highest pitch; till at last combatant No. 1 is summarily transferred into the vessel containing combatant No. 2, and the real business begins. Rapid strokes of the tail and quick vibrations of the fins follow, till one or the other, vanquished, seeks safety in flight, and eventually jumps from the water, leaving his antagonist master of the field."

The following is an analysis of a confidential circular from the Russian Government, dated the 26th of September, relative to the Brussels Conference, which was delivered to foreign Governments last month:—

"The Russian Cabinet, being interrogated from various quarters as to its future course, replied that the Brussels Conference was an inquiry, and that its protocols reproduced the harmonising or opposing opinions of the Governments represented. The final protocols reserved the examination of the questions discussed for the various Governments. Consequently, these Governments, having received the protocols, will consider the decisions to be arrived at. St. Petersburg appears to be a suitable place for receiving the various conclusions, observations, and proposals on the subject. Thereupon Russia would state whether it would be desirable to embody the points agreed upon in a document intended as an exchange of declarations, or to bring forward a fresh scheme, or, lastly, to propose a new meeting of delegates for a final convention. Foreign Governments are requested to send their observations, proposals, and conclusions to St. Petersburg as soon as possible."

The Judge who sentenced Count Von Arnim has been called upon to explain how it happened that the sentence on that nobleman was published in Vienna several hours before it was pronounced in Berlin.